

JICA

Japan International Cooperation Agency

**EVALUATION OF THE INSTITUTE OF TRAINING ON ROAD
MAINTENANCE AND CONSTRUCTION MACHINES
IN THE KINGDOM OF MOROCCO**

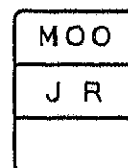
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REPORT

(FINAL VERSION)



Maroc Développement

June 2002

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FORWORD:

Japan International Cooperation Agency (JICA) entrusted Maroc Développement, a company of technical study and engineering consulting, with the task of conducting an evaluation of the project of the Institute of Training on Road Maintenance and Construction Machines in Skhirat (IFEER–Skhirat).

The objective of the setting up of IFEER was to fill the shortage observed in technician training and work quality, in the field of road maintenance and construction.

Indeed, the concern to have a road network which responds to the socioeconomic imperatives in Morocco, led the DRCCR to implement a policy centered on:

- the safeguard of the road equipment to be able to improve the existing road infrastructure;
- the adaptation of the road network to traffic evolution in order to improve the level of service offered to users as well as road security
- the extension of the road network and improvement of the servicing of rural areas.

The interaction between this policy and human resources requires continuously more knowledge and constantly renewed expertise.

Hence, human resources are considered as a fundamental and strategic element to ensure the success of DRCCR's actions.

Within this framework, DRCCR set up, with the assistance of JICA, the Institute of Training on Road Maintenance and Construction Machines (IFEER) in order to enhance the value of the human factor on the one hand, and to improve the techniques and management of road maintenance on the other hand, through on-going education and skills enhancement.

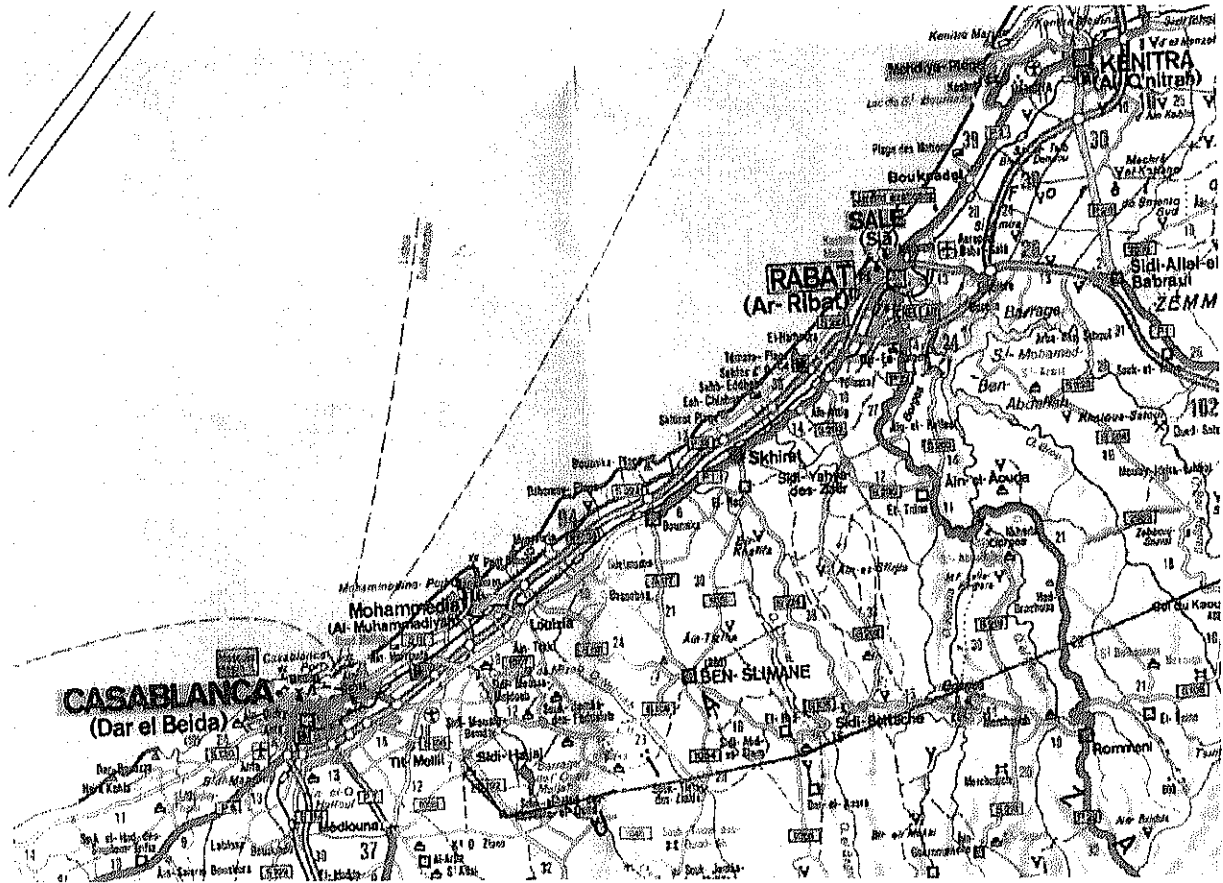
PROJET LOCATION:

The Institute of Training on Road Maintenance and Construction Machines (IFEER) is located at the northern outskirts of Skhirat, a small developing town, located at about 25 Km south of Rabat, the capital of the Kingdom of Morocco.

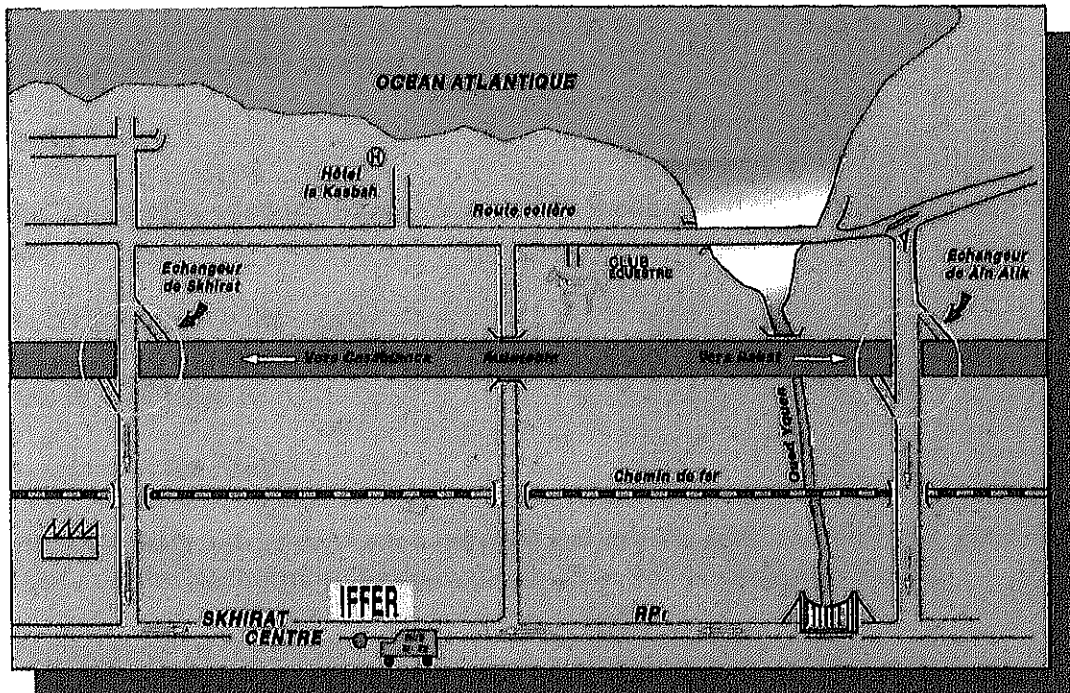
On the administrative plan, Skhirat is a municipality falling under the jurisdiction of the prefecture of Skhirat-Témara, which itself falls under the authority of the Wilaya of Rabat.

IFEER can be reached through the main road No 1 (RP1).

V- Geographical Location:



Location Plan:



I- ORGANIZATION OF THE EVALUATION STUDY

I.1 Objective of the Evaluation Study:

As IFEER opened as from 1993, the main objective of the study to be conducted by Maroc Développement is to evaluate the Institute in order to have a clear vision on its present situation and draw necessary conclusions.

I.2 Study Team:

The team, assigned to conduct the evaluation study is composed of the following staff members:

Mr. M. LAMSAOURI
Mr. A. ZKIK
Mrs. R. AIT HSAIN

I.3 Duration of the Study:

The evaluation study will be conducted between January 28, 2002 and March 8, 2002. It is agreed that the final document to be delivered to JICA will be drafted in French.

I.4 Methodology of the Study

The evaluation will be conducted on the basis of the following investigations :

- Collection of existing documentation,
- Sorting and analysis of collected documentation,
- Interviews with concerned persons:
 - a) IFEER's Director;
 - b) Trainers;
 - c) Concerned officials at the Directorate of Roads;
 - d) Concerned officials at the Ministry of Equipment;
 - e) Trainees;
 - f) All other institutions or persons who benefited from IFEER services

After the gathering of all available data, a synthesis, as precise as possible, will be established and will serve as a main basis to start the actual evaluation of IFEER.

II- PROJECT OVERVIEW

II.1 Context of the Project :

- **Stages of the Project Realization:**

The realization of IFEER project is a fruit of Moroccan and Japanese cooperation.

IFEER setting up agreement was concluded between the Ministry of Equipment of the Kingdom of Morocco and Japan International Cooperation Agency (J.I.C.A).

The realization of the project was carried out according to the following schedule:

- 1990 : Beginning of negotiations between DRRCR and JICA
- 1991 : Project Design Study
- January to December 1992 : Construction of IFEER buildings
- January to June 1993 : Equipment and staff recruitment
- July 1993 : Starting of the training
- April 1992 to April 1997 : Technical Cooperation (dispatch of Japanese experts and training of Moroccan counterparts in Japan)
- December 1995 : Financial Autonomy of IFEER

➤ **Project Financing:**

The financing of the project was broken down as follows:

a) Moroccan side:

Purchase of land	:	1.8 MD
Construction of accommodation and enlargement	:	7.2 MD
Equipment of the administration and boarding	:	1.8 MD
Total	:	10.8 MDH

b) Japanese Side:

Construction of buildings	:	54.0 MD
Educational facilities	:	52.5MD
Total	:	106.5MDH

➤ **Project Spatial Distribution:**

IFEER is set up on a surface area of seven (7) hectares distributed as follows:

- 5 ha : Land for equipment operating
- 1239 m² : Administrative building and classrooms
- 1535 m² : Workshops and laboratories
- 936 m² s: Equipment shelters
- 2772 m² : Housing and catering
- 1950 m² : Staff accommodation
- 11541 m² : Sport field, parkland, parking lot.

➤ **Dependence of IFEER :**

Although IFEER is endowed with a financial autonomy, it depends on the administrative level of the Directorate of Roads and Road Traffic (DRRCR). Its staff enjoys the status of State civil

servants and its finances are subjected to the administrative procedure of public money control.

II.2 Organization of Initial Project:

1) Project Objective:

The objective of IFEER project is to develop and enhance the value of human potential on the one hand and to improve the techniques and management of road maintenance on the other hand through on-going training and skills advancement.

2) Equipment and Didactics:

a- Equipment Park:

- 3 bulldozers
- 5 graders
- 2 wheeled loaders
- 2 tracked hydraulic shovels
- 1 wheeled steamroller
- 2 steamrollers with smooth, vibrant cylinder
- 1 crane truck
- 2 tipper trucks
- 1 equipment carrier
- 1 truck cistern

b-Laboratory and Civil Engineering Material:

- Automatic recorder of C.B.R test
- Marshall stability automatic recorder
- Soil identification and classification devices
- Devices for mechanic tests : L.A, M.D.E.A,..
- Devices for asphalts tests
- Topographic devices
- Gritter
- Bitumen spreader and bin

c- Equipment of Mechanic Workshops:

- Engine test bed: max power 600 cv
- Hydraulic devices universal test bed
- Injection pumps test bed
- Electric test bed
- Machine for disassembly and assembly of caterpillars
- Hydraulic presses
- Diagnosis devices
- General purpose and specific tools
- Metrologic devices.

d- Teaching Aids:

- Audiovisual material (video cassettes, slides, movies)
- Full scale model: motor, injection pump, transmission,
- Reduced scale model: different parts and systems
- Microcomputer, accounting software,
- Drawing tables
- Library: technical and general documentation

3) Human Means :

All the trainers have gained an extensive experience within the framework of the Moroccan-Canadian project at Ain Borja Center in Casablanca. This experience was reinforced by a practical training in the field. In addition, the majority of trainers attended a training in France as well as a skill advancement practical training in Japan. The staff of the Institute is as follows:

Trainers:

- 4 engineers;
- 13 trainers;
- 3 trainers' assistants;
- 10 part-time trainers from D.R.C.R .

Administrative Staff:

- 13 persons

4) Training Fields:

IEEFR intervenes in the 4 following training fields:

- Road maintenance;
- Equipment management;
- Equipment mechanics;
- Equipment operator.

5) Training Organization:

The training system is divided into 4 sections :

• Road Maintenance Section:

a) Objective:

The section of Road Maintenance seeks two objectives :

- Improve the technical level of roadworks

- Retrain technicians and enhance their skills to enable them to undertake the following tasks:
 - Repair all road deteriorations in an efficient manner;
 - Control and ensure the follow-up of roadwork execution;
 - Manage and organize a civil engineering worksite in an optimal manner.

b) Training Duration and Content:

The training is organized in two forms:

- Normal Cycle:

The training lasts for two months during which the trainees receive theoretical courses and do practical work in the following themes :

- Recall of general knowledge;
- Control of the quality of materials and works;
- Road studies (Tracing, topography,..);
- Techniques of road deteriorations repair;
- Economic evaluation of public work projects.

- Specific Modules:

Generally short (one week), the modules are organized around a specific theme, chosen by the interested trainees.

c) Target Group:

The candidates targeted by the road maintenance training are:

- civil engineering technicians
- Foremen and worksite supervisors, having the level 7th year of secondary plus a professional training.

d) Supervision :

The supervision of trainees is ensured by:

- 1 civil engineer;
- 3 trainers;
- 6 part-time lecturing-engineers from DRCC .

• Equipment Management Section:

a) Objective :

The objective of the training is to ensure an optimal availability and operation of the construction equipment.

b) Training Duration and Content:

The normal cycle training lasts for three months, and for few days for the specific modules.

In addition to some general courses (accounting, data processing,..) the training focuses mainly on:

- the organization and management of the equipment maintenance
- the choice and calculation of the equipment productivity
- the management of spare parts stocks.

c) Target Group:

The candidates targeted by this training are:

- persons responsible of the management of a park of heavy equipments
- persons responsible of maintenance technical office and supervisors of workshops
- chief storekeepers

having the level of 7th year of secondary plus a professional training.

d) Supervision :

The supervision of trainees is ensured by:

- 1 engineer
- 2 trainers
- 4 part-time lecturing engineers

• Equipment Mechanics Section:

a) Objective :

The equipment mechanics section provides a practical training, enabling the mechanic to realize a correct diagnosis and safely perform repairs, respectful of constructors' instructions.

b) Training Duration and Content:

The training is organized in a normal cycle lasting for three months and specific modules lasting between one week to one month. After a core curriculum, the trainees are split into two groups:

- Group I: Hydraulics and bearings train;
- Group II: Diesel and injection engines.

The main courses include :

- Diagnosis of breakdowns
- Use of constructors' manuals and catalogs
- Repair of different types of engines (GM, Cummins, Komatsu, Caterpillar,...)
- Electric and hydraulic systems and diagrams
- Use of test beds
- Metrology,..

c) Target Group :

The targeted candidates by the equipment mechanics training are:

- mechanics
- mechanics assistants
- electricians

having the level of 5th year of secondary plus a professional training.

d) Supervision :

The supervision of trainees is ensured by:

- 1 engineer
- 4 trainers
- 2 trainers' assistants

• Section of Equipment Operators:

a) Objective:

This training enables trainees to execute safely a quality mechanized work through mastery and rigorous maintenance of equipment.

b) Duration and Content of the Training :

Two types of training are provided to trainees in this section :

- Normal Cycle:

This three-month training emphasizes on the maintenance, security and operation of five earth-moving equipments: Bulldozer, Loader, Grader, Hydraulic Shovel and Steamroller. At the end of the training, trainees are required to achieve works in a real site, organized by IFEER in collaboration with D.T.P and the communes that express the desire.

- Modules :

Generally short (1 to 4 weeks), the training focuses on a specific theme relating to equipment operating or preventive maintenance.

c) Target Group :

The candidates targeted by the equipment operating training are :

- Experienced drivers (illiterate or with low school level)
- Candidates having a level of 5th secondary education plus 2 years of training in a Center of Professional Qualification of OFPPT or equivalent,

d) Supervision:

The supervision of trainees is ensured by:

- 1 engineer
- 4 trainers

III- PROJECT EVALUATION :

The final evaluation of IFEER project will build upon the analysis of the following topics:

- Infrastructures;
- Material means;
- Human means;
- Organization of the training;
- Outcome of IFEER activity since its inception;
- Prospects of IFEER .

In the analysis of the topics stated above, consideration will be given to the precisions brought by the different interviews, conducted previously.

III.1 Infrastructures :

Today, IFEER has a land of 7 hectares, 2 built and 5 serving as operation land for earth-moving equipment.

It should be noted that IFEER has known some expansions, consisting in the construction of the laboratory and the enlarging of the equipment shelter in 1995.

III.2 Materiel Means :

The material means, listed in the previous chapter, respond perfectly to the pedagogic and didactic needs of the training provided at IFEER.

However, the investigation led in the form of interviews with the trainers revealed sometimes some deficiencies and shortages at the level of the material means.

Aiming rather at improving the training, which is meant to follow closely the technological evolution, these observations are related below for each sections :

- Section of Road Maintenance :

In this section, the trainees are called to ensure, among other tasks, the optimal management and organization of a road construction project which involve almost always a civil engineering works component (different concrete or reinforced concrete works).

The setting up of a laboratory, specialized in concretes will undoubtedly add a plus to the training provided within this section.

- Mechanics Section :

The material means made available for this section respond perfectly to the pedagogic and didactic needs of the training.

However, the availability of a diversified range of equipment brands, together with compatible tools (electronic diagnosis devices,...) will widen the scope of action of the trainers, which will implicitly impact on the training by giving it a larger expression spectrum both in quality and content.

- Equipment Management Section :

The nature of the training in this section does not require any particular material. The computers installed at IFEER respond sufficiently to training needs, but this does not prevent their upgrading to catch up with technological evolution.

- Machine Operation Section:

The material used for training purposes in this section includes a complete and diversified range of equipment in good working state but rather old.

The introduction, to the extent possible, of new generation equipment, fitted with electronic systems would be a good input for a more complete training of trainees.

It should be indicated in this context, that new generation pieces of equipment have already made their apparition in work sites.

III.3 Human Means:

Thanks to their solid technical and pedagogic training, the trainers acquired, a specialty-related extensive experience in the handling of the material and didactic means, made available to them at IFEER.

However, their training and experience could be improved even better if periods of retraining and information about new technologies were organized in their favor.

IFEER staffing is given in the following organizational chart:

III.4 Training Organization:

The objective of IFEER, being the retraining and skill enhancement of road maintenance personnel either from public or private sectors or individuals, the training is always organized in four sections without any change in the number of full-time trainers or part-time lecturers.

In each section, the training is offered in two forms: A normal cycle which lasts between 2 and 5 months, depending on the specialty and a modular cycle lasting for few days.

. Normal Cycle:

Section	Admission-Insertion	Admission-retraining	Duration of training	Frequency
Equipment operating	5 AS + 2 years of professional training in OFPPT institutions	Equipment operators	3 months	3 times/year
Public works equipment mechanics	5 AS + 2 years of professional training in OFPPT institutions	Personnel in charge of maintenance	5 months	Twice /year
Equipment management	7 AS + 2 years of professional training in OFPPT institutions	- Park Chief - Workshop Chief - Warehouse Chief	3 months	3 times/year
Road maintenance	7 AS + 2 years of professional training in OFPPT institutions	- Chief of brigade - Foreman - Work supervisor	2 months	4 times/year

. Special Cycle:

The special cycle involves short training modules (few days) and is designed to respond to users' needs in the specialty of their choice.

The admission requirements are the same as those of the normal cycle.

. Seminars:

Within the framework of a tripartite convention signed by the Kingdom of Morocco, JICA and French-speaking African countries, IFEER organizes training seminars for road technicians from different African countries. The seminars last for almost one month, and deal each with one theme relating to the 4 specialties taught at IFEER.

The expenses of the participants are born at the rate of 85% by JICA and 15% by the Kingdom of Morocco.

III.5 System of Studies:

The system of study adopted at IFEER is the boarding, non-residency or half-boarding.

III.6 Outcome of IFEER Activity:

. Training :

Since the beginning of training in July 1993, the number of persons trained as of December 31, 2001 was 1553 in the normal cycle, which corresponds to the forecasts assigned to IFEER.

Furthermore, at the request of the DRCCR and certain private and public entities, every section offered, in addition to the normal cycles, short-term trainings called modules, going from one week to one month, treating specific themes. The number of persons trained within these modules was 333.

Thus, the total number of persons who received a training at IFEER is 1886.

. Adaptation of Programs and Training Periods:

In order to better respond to users' needs, IFEER has, since its setting up, constantly adapted the content of its program and the duration of training. These changes were made in response to the recommendations of the annual educational councils, as well as logistics and material services (SLM), public and semi -public entities and the graduates themselves.

After all these attempts of adjustment and re-adjustment of the programs and their length, it was proved that the best formula is the one described here below.

. Productive Training:

In addition to the theoretical and practical training provided in at IFEER workshops and operation field, productive training is privileged whenever the opportunity allows it. For this reason, the training at IFEER is also strongly characterized by the realization of real works on sites, similar to those undertaken by the trainees in their workplace.

Indeed, the training staff, with the participation of trainees, undertake the repair of mechanical parts of different SLM and the execution with IFEER's equipment of road works in sites under the jurisdiction of local governments and provincial directorates of the Ministry of Equipment.

. Prospects of IFEER :

In order to assert its training know-how and expertise in the field of road maintenance and works, IFEER set to itself forward-looking objectives by conducting various investigations with different intervening parties of the road sector.

To this end, DRCCR, represented by IFEER, took part in the international fair of public works and quarry equipment, held in Casablanca in 1995. It was the first opportunity offered to IFEER to publicize itself and make contacts with enterprises and individual operators of the sector.

At the end of 2000, IFEER concluded a convention in the form of general contract with ODEP (Office of Development and Equipment of Harbors) for the training of 30 mechanics.

At present, negotiations have been launched with the entities listed below in order to identify the requirements and define the adequate modes to sign conventions similar to the one stated above.

Concerned entities:

- OFPPT : Office of Professional Training and Work Promotion
- OCP : Office Chérifien of Phosphates
- ODEP : Office of Development and Equipment of Harbors
- FNBTP : National Federation of Construction and Public Works
- FEC : Communal Equipment Fund

IV- FINDINGS :

IV.1 Efficiency :

The transfer of Japanese technology by a highly qualified team of Japanese experts, the strong training and extensive experience of the trainers, combined with a diversified and effective material, provided by the Japanese government, make of IFEER an efficient instrument for on-going education and retraining of technicians working in the road sector. The complementarity of the specialties, taught, makes it that every operator in road works can have a complete and homogeneous and thus efficient team.

The need to fill the shortage in the maintenance and construction of roads and tracks throughout the country, requiring a qualified staff, highlights even more the importance of IFEER.

IV.2 Impact :

The training provided by IFEER is a training that is meant to be operational for an optimization of resources. Supervised by a team of highly qualified trainers, who gained technical experience with Japanese experts and followed a JICA training program in Japan or in a third country, the training develops the technician's sense of responsibility and confidence in his capacities, making of him an element capable of exploiting at maximum an equipment while making him available at all moments.

As a consequence, this leads to a longer life span for the material, a gain of time and a better quality of the work turned in.

IFEER-trained technicians contributed all, one way or another, to the improvement of road infrastructure in the Kingdom of Morocco, particularly in the construction of rural tracks and roads, as well as to the construction of highways.

By providing a high-quality training, IFEER reaches the expected priority objective:
« improve the quality of road networks in Morocco ».

IV.3 Overall Objective:

IFEER has the singularity to be the sole institute at national and African levels, specialized in the operation, repair and management of public work equipment.

After 9 years of existence, IFEER became an indispensable training tool for DRCR, its major partner at the present time. It trained about 75% of its agents intervening in road maintenance and construction and some agents of other entities.

IV.4 Sustainability :

With its nine years of existence, IFEER, sole institute of its kind, have gained an extensive experience in on-going education and retraining of the agents intervening in road maintenance and construction works.

The sustainability of IFEER is dependant on its opening up onto other public or private entities, intervening in public works, and on individuals and why not other African countries.

Conscious of the role it is deemed to play and in order to ensure its sustainability, IFEER decided to use all information means to publicize the institute in order to attract in the future the maximum number of trainees from the public and private sectors and increase the number of its graduates.

In this perspective, the Administration of IFEER started a series of meetings with various entities and enterprises in order to sensitize them on the training provided by the institute and arouse their interest.

A TV report on IFEER was realized by the second TV channel 2M and broadcast on Sunday 17 February 2002 in the evening, to initiate the audience on IFEER's activities.

IV.5 Favorable Factors:

Among the favorable factors, the following can be mentioned for the whole:

- ▣ Geographical situation, close to the capital
- ▣ Infrastructures compatible with the spirit of the training
- ▣ Section officers and trainers with good training and extensive experience
- ▣ Very efficient pedagogic and didactic means
- ▣ IFEER being unique of its kind in all Africa
- ▣ Specialties taught aimed at a very promising sector
- ▣ Need for on-going education, retraining and advancement of the agents intervening in the public works field,
- ▣ Opening onto the public and private sectors as well as interested individuals.

IV.6 Unfavorable Factors:

In reality, the current unfavorable factors, listed below, can be put into use in favor of IFEER in the future by remedying them gradually, according to the possibilities offered:

- ▣ Insufficiency on the marketing level: IFEER is not sufficiently known,
- ▣ Lack of on-going education and retraining in favor of trainers,
- ▣ Insufficient diversity of equipment brands,
- ▣ Duration of training in the normal cycle: Some entities are upset by the prolonged absence of their agents,
- ▣ Cost of the training, judged high, particularly by a certain category of the private sector and individuals,
- ▣ Training almost monopolized by the agents of the Directorate of Roads and Road Traffic.

IV.7 Conclusion :

Its uniqueness in the field of road maintenance and construction, the quality of training provided, the skills and experience of the trainers and the pedagogic and didactic aids, constitute all positive factors that speak in favor of IFEER.

Since its creation in 1993 and given the specific nature of its objective, i.e. ongoing education and retraining through technology transfer to DRCR staff, intervening in road maintenance and construction, IFEER has imposed itself as an indispensable training tool for DRCR.

The evaluation of the present situation of IFEER leads to the following findings:

- **Materiel Means :**

With the same pedagogic and didactic means put at its disposal since its creation, IFEER was able to maintain, if not improve throughout the years, the quality of the training provided, thanks to the good will of its Administration, backed by an experienced and highly qualified team of trainers.

- **IFEER's Strategy:**

The strategy applied at IFEER relies on two training systems, proper to it:

- An on-going education in the normal cycle;
- A limited training in modules.

For both training systems, practice prevails over theory, with a proportion of 70% of the time.

- **Target Trainees:**

Up to now, the training provided at IFEER was directed almost exclusively toward DRCC technicians; the number of trainees coming from other public bodies or private sector is practically insignificant in comparison to the total number of graduates trained at IFEER.

This disproportion in the number of trainees could constitute a serious handicap for IFEER in the future, if no measures to remedy this fact are adopted in the short-term.

- **Technological Evolution:**

At the technological plan, the training at IFEER has not practically known any evolution, because of the stagnation of its pedagogic and didactic aids, particularly with regard to mechanics and the operation of equipments as well as the on-going education and retraining of trainers.

- **Social Impact:**

The training provided at IFEER does not bring any improvement or change in the social status of graduates of the public administration. On the other hand, it constitutes an important asset with regard to their professional expertise.

On the other hand, the other graduates serving in the private sector, benefit from better arrangements and incentives for the improvement of their social status or, if not, finding a job.

- **Institutional Aspect :**

IFEER falls under the administrative authority of DRCC. It is considered as a Public Facility Managed Autonomously (SEGMA). Its administrative and technical staff is taken in charge by DRCC as civil servants.

Its autonomy resides in the decision making, training organization and management as well as the maintenance of premises and equipment.

- **IFEER's Resources :**

The unique financial resource of IFEER comes from the payment for the training it provides. This total income represents its annual budget, allocated exclusively to the following internal actions:

- Buildings maintenance works,
- Maintenance of didactic material and equipments,
- Purchase of fuel,
- Expenses for the trainees' boarding,
- Wages of cleaning personnel.

V- RECOMMENDATIONS AND LEARNED LESSONS:

V.1 Recommendations:

V.1.1 For the Kingdom of Morocco:

Unique of its kind and recognized as an indispensable training tool in the field of road maintenance and construction, IFEER deserves to be given a particular interest by DRCR. This interest should be manifested by the initiation of certain actions, likely to guarantee its future and make of it a known and recognized institution in the service of all intervening parties in road maintenance and construction.

To this end, the following recommendations should be considered:

- Promote IFEER at the national and continental levels, using all information means,
- Organize information actions to better transmit the interest of training and its repercussion on the works turned up in terms of quality/cost,
- Provide on-going education and retraining for the trainers in order to allow them to catch up with technological evolution,
- Reinforce the pedagogic and didactic materiel with new material that is compatible with technological advances, which will make possible the development of training modules to the benefit of old IFEER's graduates,
- Arouse the interest of other public or private organisms as well individuals, to train their staff, intervening in road maintenance and construction,
- Conclude conventions with OFPPT training centers, particularly in the field of mechanics, to train mechanics, specialized in public work equipments,
- Confer a recognized end-of-training diploma in the sections of mechanics, road management and maintenance and a special driving license for the section of earth-moving equipment operation.

V.1.2 For JICA :

As a fully-fledged partner in the setting up of IFEER, JICA is consequently always concerned by the future prospects of this latter. Its intervention in favor of IFEER can be expressed by the following actions :

- Ensure a periodic follow-up of IFEER's activity through field visits,

- Request IFEER Administration to submit an annual activity report, making reference to the shortcomings and needs, felt by IFEER,
- Incite and encourage French-speaking African countries to take advantage of IFEER's expertise by sending their trainees to it.

V.2 Learned Lessons:

V.2.1 Vis-à-vis the Situation in the Kingdom of Morocco:

The evaluation of IFEER made it possible to note that its raison-d'être is rightly justified insofar as it filled the need for a quality training in the specific field of road maintenance and construction, which was lacking in Morocco.

The existence of IFEER gives to Morocco the instrument to receive and manage usefully the technological transfer, from Japan in a first phase, then from any other State possessing a state-of-the-art technology in the field of earth-moving equipments, road maintenance and construction.

Thanks to IFEER, Morocco can envisage an on-going education to the benefit of the national public and private sectors as well as propose its services particularly to French-speaking African countries. For this last point, a strategy needs to be developed, with a JICA support, aimed at publicizing IFEER among the African operators intervening in road maintenance and construction.

Besides, at the national level, the culture of on-going education is increasingly gaining ground among the operators intervening in road maintenance and construction. The impact of the training is felt in the professional mastery of the trained staff, which is evidenced by:

- Improvement of the output,
- Improvement of the quality of work turned in,
- Availability of the equipment at all moments,
- Longevity of the equipments.

This results consequently in notable economic and financial gains.

On the other hand, on the social level, the specialized training provided at IFEER, can facilitate the insertion of free candidates.

V.2.2 IFEER 's Management:

The management of IFEER did not experience, nor undergo any change since its inception; the supervising administration is always the DRCCR.

The organizational chart presented earlier remains unchanged.

List of the interviewed persons:

M. DARKAOUI	Director of IFEER
M. HARIM	Officer in charge of Mechanics section
M. HINANI	Mechanics section trainer
M. HABCHI	Mechanics section trainer
M. MQADMI	Officer in charge of road maintenance and management sections
M. EL ATTAR	Road Maintenance trainer
M. SAADI	Officer in charge of the Equipment Operating section
M. HADRAMI	Equipment Operating trainer
M. CHAABI	Equipment Operating trainer
M. HANAFI	Equipment Operating trainer
Mme ESSIRAJ	Head of the Personnel Affairs and Management Office SLM/Rabat
Mme ABIZA	Officer in charge of Training at the Regional Directorate of Equipment in Rabat
M. BENHAMOU	Head of the General Administration Service, Officer in charge of on-going training at the regional level
M. OURAHOU	Head of the Human Resources Division at DRCR
M. EL BOUZIDI	Head of the Human Resources Service at DRCR
M. AKHIYAT	Project Director at the Communal Equipment Fund

